



Atlas Air A7500

**Kit Number:
AA57596**

**Fits:
Ford Super Duty**

Engineered and Assembled in the USA

Installation Instructions

Before Getting Started

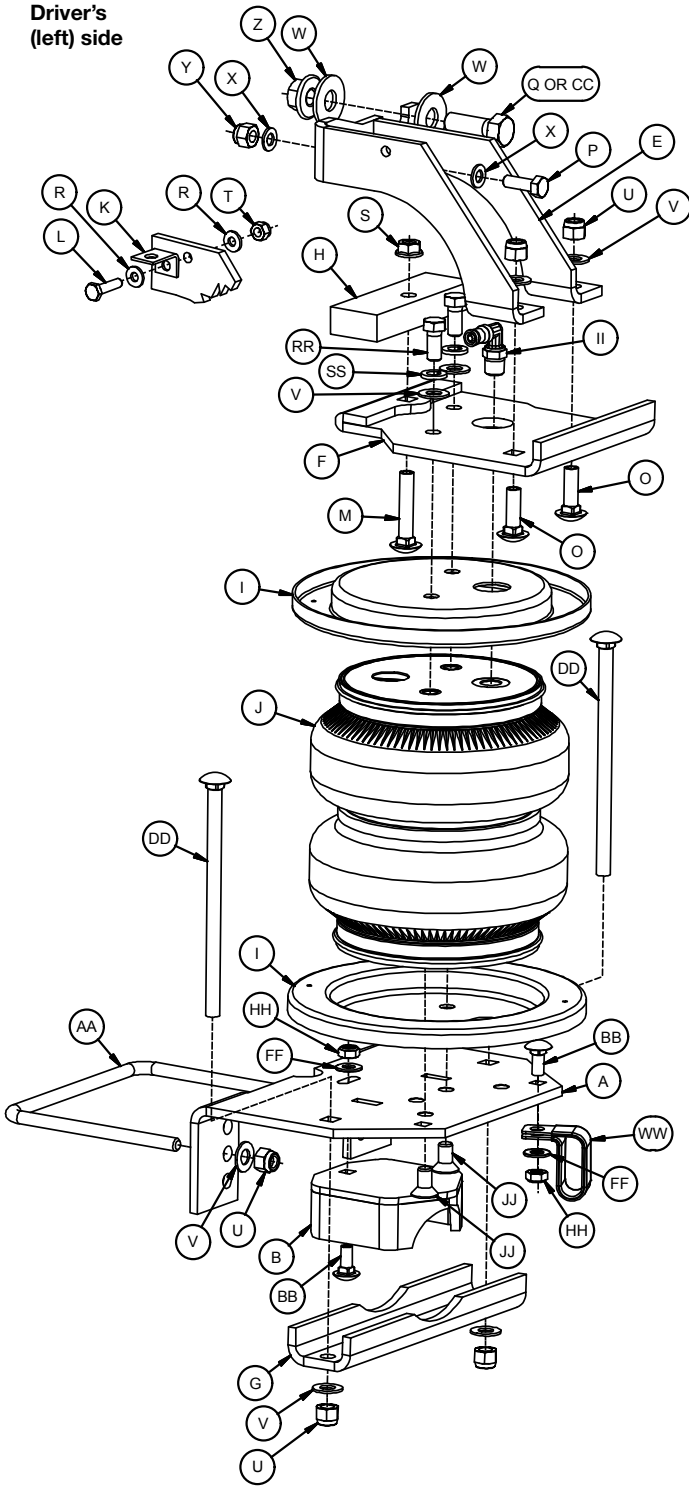
For optimal performance and safety, read all instructions thoroughly before beginning the installation. Failure to read and follow these instructions may lead to improper installation and potential safety risks.

Tools Needed

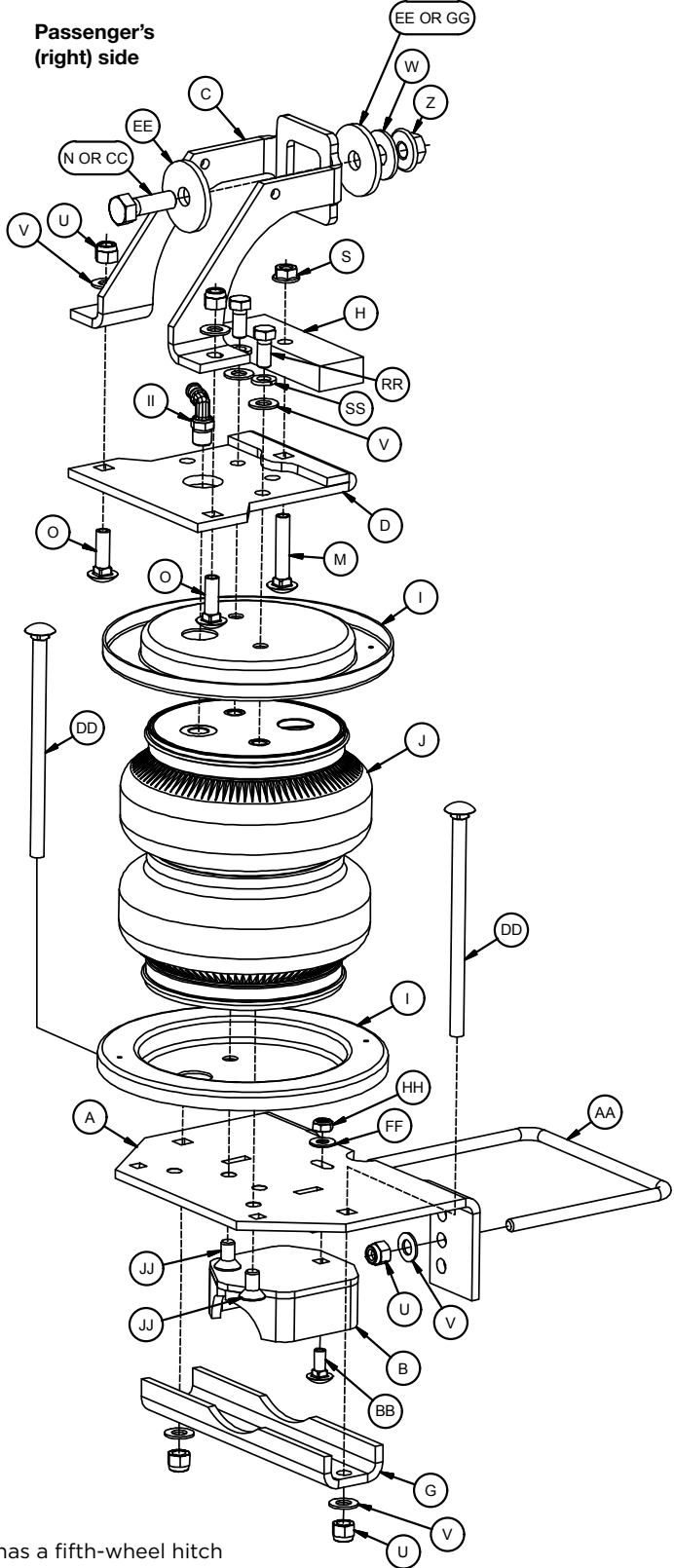
- Metric & standard open-end box wrenches
- Ratchet with metric & standard sockets
- Standard hex keys
- Drill and 5/16" drill bit
- Torque wrench
- Hose cutter, razor blade or sharp knife
- Hoist or floor jack
- Safety stands
- Safety glasses
- Air compressor or compressed air source
- Spray bottle with dish soap/water solution

AA57596 Exploded Installation View

Driver's
(left) side



Passenger's
(right) side



* NOTE: If the vehicle has a fifth-wheel hitch installed that has side plates along the frame, use the existing hardware that was removed. If not, use the 1/2" hardware supplied and recommended in this kit and in the directions in this manual.

Parts List

Part	Part No.	Part Description	QTY
A	03964GR	Lower bracket main plate	2
B	03998GR	Lower bracket cup	2
C	07975G	Upper brace, RH	1
D	07965G	Upper bracket, RH	1
E	07676GR	Upper brace, LH	1
F	07666GR	Upper bracket, LH	1
G	01851GR	Clamp bar	2
H	13966GR	Spacer	2
I	11897	Roll plate	4
J	58126	Air spring	2
K	10886	L-bracket	1
L	17135	1/4"-20 x 1" Hex cap screw	1
M	17140	3/8"-16 x 2" Carriage bolt	2
N	17161	1/2"-13 x 1 1/2" Hex cap screw	1
O	17361	3/8"-16 x 1 1/4" Carriage bolt	4
P	17177	M8-1.25 x 25 Hex cap screw	1
Q	17412	1/2"-13 x 1 1/4" Hex cap screw	1
R	18419	#12 Flat washer	2
S	18422	3/8"-16 Serrated flange lock nut	2
T	18425	1/4"-20 Nylon lock nut	1
U	18435	3/8"-16 Nylon lock nut	12
V	18444	3/8" Flat washer	16
W	18485	1/2" Flat washer	3
X	18501	M8 Flat washer	2
Y	18522	M8-1.25 Nylon lock nut	1
Z	18505	1/2"-13 Serrated flange lock nut	2

Part	Part No.	Part Description	QTY
AA	11717	U-bolt	2
BB	17113	5/16"-18 x 1" Carriage bolt	3
CC	17271	1/2"-13 x 3" Hex cap screw	2
DD	17387	3/8"-16 x 10" Carriage bolt	4
EE	18207	1/2" Thick flat washer	2
FF	18433	5/16" Flat washer	7
GG	18556	3/4" Flat washer	1
HH	18613	5/16"-18 Thin nylon lock nut	2
II	21837	90-degree Swivel elbow fitting	2
JJ	17215	3/8"-24 x 3/4" Flat-head screw	4
KK*	20086	Air line	1
LL*	10466	Zip tie	6
MM*	21230	Valve cap	2
NN*	18501	5/16" Flat washer	2
OO*	21234	Rubber washer	2
PP*	18411	Star washer	2
QQ*	21233	5/16" Hex nut	4
RR	17203	3/8"-24 x 7/8" Hex cap screw	4
SS	18427	3/8" Lock washer	4
TT*	17103	5/16"-18 x 1" Hex cap screw	2
UU*	18438	5/16"-18 Nylon lock nut	3
VV*	22640	High-temp zip tie	1
WW	26333	Modified P-clamp	1
XX*	11907GR	Emergency brake cable secondary bracket	1
YY*	11908GR	Emergency brake cable primary bracket	1

* These parts are not shown in the Exploded Installation View section

Introduction

This guide is here to walk you through setting up and taking care of your Atlas Air™ A7500 air suspension kit. They are built tough—commercial-grade and reinforced for durability. Think of the air springs like tires: layers of rubber and strong cords work together to manage pressure and maintain shape to help control your ride.

With Atlas Air A7500, you'll get up to 7500 pounds (3402 kg) of support to keep your ride level, and you can fine-tune the pressure anywhere between 5 and 100 PSI (0.34 to 7 BAR). Before diving into the installation or doing any kind of upkeep, make sure to read through the entire manual—it'll save you time and headaches down the road.

Symbols



THIS MEANS THERE'S AN IMMEDIATE AND SERIOUS RISK. IF IGNORED, IT WILL LEAD TO SEVERE INJURY OR EVEN DEATH. ALWAYS TAKE THESE WARNINGS SERIOUSLY.



SIGNALS A DANGEROUS SITUATION OR UNSAFE ACTION THAT COULD CAUSE SEVERE INJURY OR DEATH. IT'S NOT A GUARANTEE, BUT IT'S A BIG RISK—PROCEED CAREFULLY.



These callouts highlight useful advice or important reminders to keep you on track during the process. Don't skip them—they often save time.



Little tricks of the trade to help installation go more smoothly. These tips can make a big difference if you're aiming for a clean, efficient job.

Information

This kit does not increase the Gross Vehicle Weight Rating (GVWR) or payload capacity of your vehicle. Always refer to your vehicle's Safety Compliance Certification Label or owner's manual, and do not exceed the manufacturer's maximum load rating.

- **Gross Vehicle Weight Rating (GVWR):**

The maximum allowable weight of a fully loaded vehicle, including passengers, cargo, and fluids.

This value—along with other important specifications like tire size, rim size, and inflation pressure—is located on the vehicle's Safety Compliance Certification Label.

- **Payload:**

The maximum combined weight of passengers and cargo your vehicle is designed to carry. Payload is calculated by subtracting the vehicle's base curb weight from its GVWR.

Air Pressure Guidelines

While Atlas Air A7500 air springs are engineered to handle a **maximum inflation pressure of 100 PSI (7.0 BAR)**, the actual pressure required will vary based on the vehicle's load and total weight. Always adjust air pressure according to your specific load conditions—**not solely based on the maximum pressure limit**.

Ride Height and Suspension Limits

Always maintain the correct ride height by adjusting the air pressure based on your current load. Shock absorbers typically act as the suspension limiters on extension. If they do not, particularly on off-road vehicles, consider using limiting straps to prevent overextension.

Brake System Considerations

Vehicles equipped with a **rear brake proportioning valve** may experience changes in braking performance when using a load-assist product. **Consult your dealer** before installation. If your vehicle **does not** have a proportioning valve or is equipped with an **anti-lock brake system (ABS)**, the installation of an air spring kit **will not affect braking performance**.

Installation

Prepare the Vehicle

1. Raise the vehicle and support it in a way, using safety stands or equivalent, that the axle can be safely dropped away from the frame. This will need to be done in order for the air spring assembly to be put into position between the axle and frame (Fig. 1).

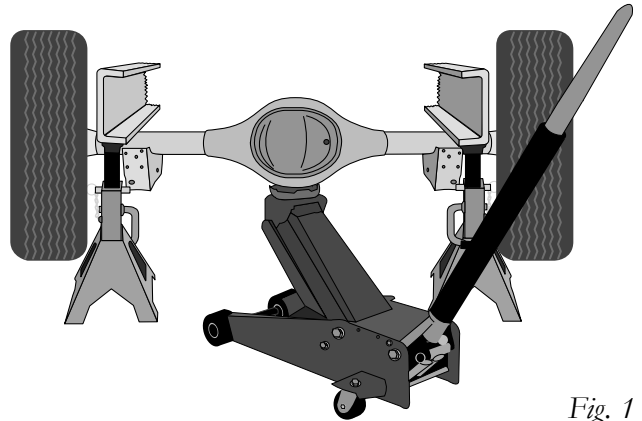


Fig. 1

2. Remove the jounce bumpers from under the frame, over the axle (Figs. 2 & 3).



Use a wire brush and some penetrating oil on the jounce bumper to help in its removal. The socket size for the nut is typically 15mm.



Fig. 2



Fig. 3

3. If necessary, disconnect the wiring harness from the driver's (left) side frame rail to gain clearance for the upper brace (Fig. 4). Also, push out the harness connector that holds the electrical lines going to the gas/DEF tank in or out of the tank bracket. This will improve socket/bolt access that will be required for installing and tightening the frame brace (Fig. 5).



Remove the line holders from the gas/DEF tank bracket for easier access to the upper brace hardware.

Fig. 4

4. If the truck has a fifth-wheel hitch already installed, **other than the standard factory Reese hitch**, remove the hardware that bolts the side bracket (plates) to the outside of the frame above the axle.

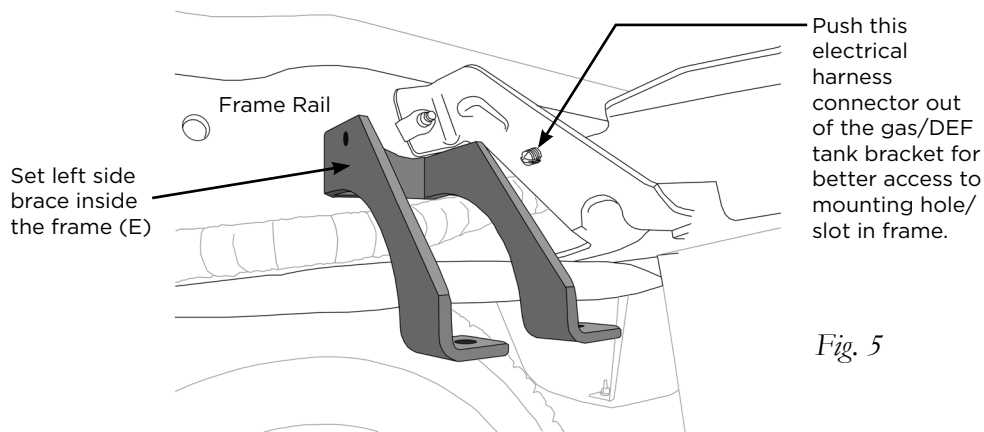
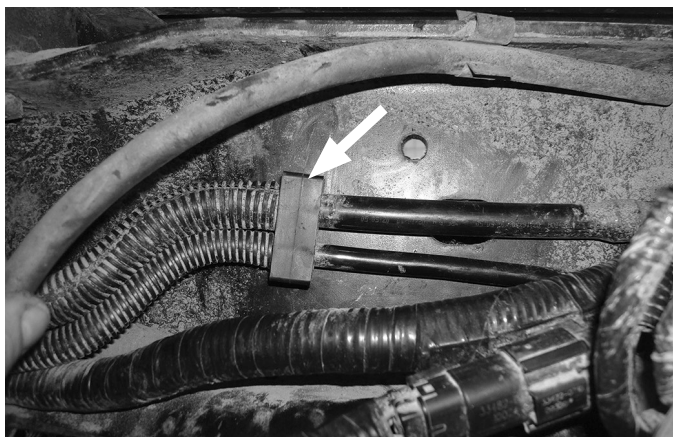


Fig. 5

Install the Braces

Gas engine models have emission lines on the inside of the frame. If the truck has emission lines running along the inside of the frame rail (Fig. 6), relocate those lines as follows:

1. Carefully push the line holder out of the frame above the axle and save for reuse. Remove any emissions/fuel line retaining clips and electrical wire loom retaining clips forward or rearward of the axle to aid in positioning the lines once the upper brace has been installed (Figs. 6 & 7) .



If equipped, this emissions/fuel line retaining clip must be pulled away from the frame in order to install the upper frame brace (E).

Fig. 6

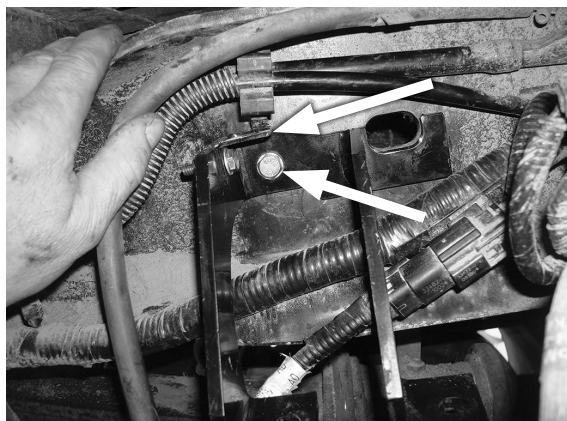


Image shows lines clear on the frame, opening it up for the brace installation.

Fig. 7

Retaining Clip L-Bracket Installation on Brace

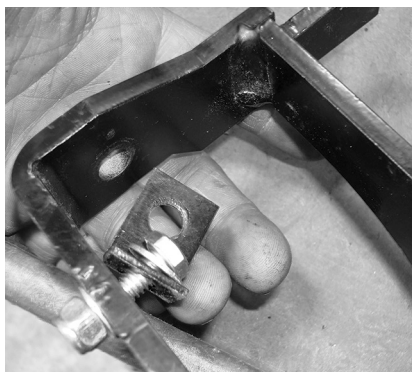
1. In order to reattach the previously removed emissions line, attach the provided L-bracket (K) to the back frame brace using the 1/4"-20 x 1" bolt (L), flat washers (R) and 1/4"-20 nylon lock nut (T) supplied (Fig. 5). Placing this L-bracket depends on where the line holder is on the wiring or the emissions line that was previously pulled from the frame. Set the driver's (left) side frame brace (E) against the frame and insert the 8mm-1.25 x 25mm hex-cap screw (P) with an M8 flat washer (X) through the brace and into the hole in the side of the frame from which the line holder was removed (Fig. 8). This will hold the line in place. Note which side the line holder is in, in respect to the back leg of the brace. Is it forward or behind the back leg of the brace? Where the line holder lines up is the side where the L-bracket is to be installed (Figs. 5 & 8).



Brace being temporarily held in place by the M8 bolt and washer. L-bracket is shown in location already. Note: The side the line holder is on depends on the location of the factory retaining clip.

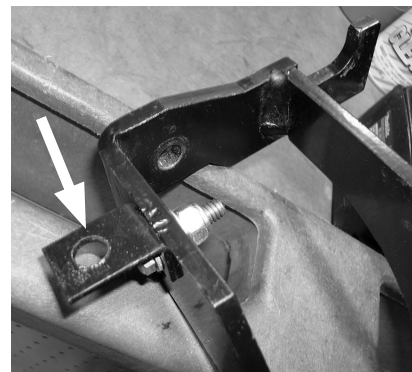
Fig. 8

2. Pull the brace back out and attach the L-bracket onto the brace with the hardware noted above, in the proper location previously found (Figs. 9 & 10). Make sure the L-bracket faces up and tighten securely.



Attach the L-bracket to the brace in the position previously found using the hardware specified.

Fig. 9



No matter what side the L-bracket is on, make sure it is installed so the flat side points up when tightening.

Fig. 10

Driver's (Left) Side Brace Installation

1. Set the left upper brace (E) into the driver's (left) side frame rail. The brace has a small hole that will line up with an existing hole in the frame. Insert the M8-1.25 x 25mm hex-cap screw (P) with an M8 flat washer (X) through the brace and frame (Figs. 11 & 12) and cap with a M8 flat washer (X) and M8-1.25 nylon lock nut (Y). Leave loose at this time.



BE SURE NOT TO PINCH THE PREVIOUSLY MOVED WIRING OR LINES INSIDE THE LEFT FRAME RAIL.

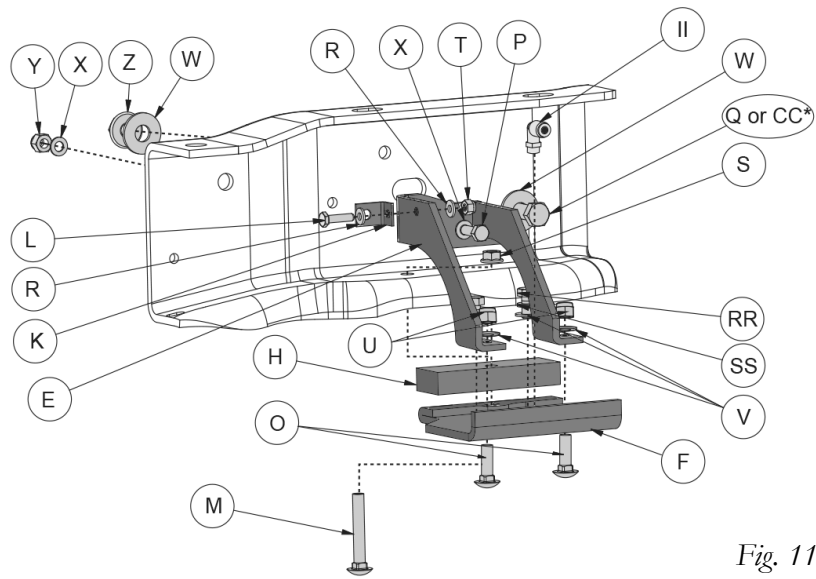
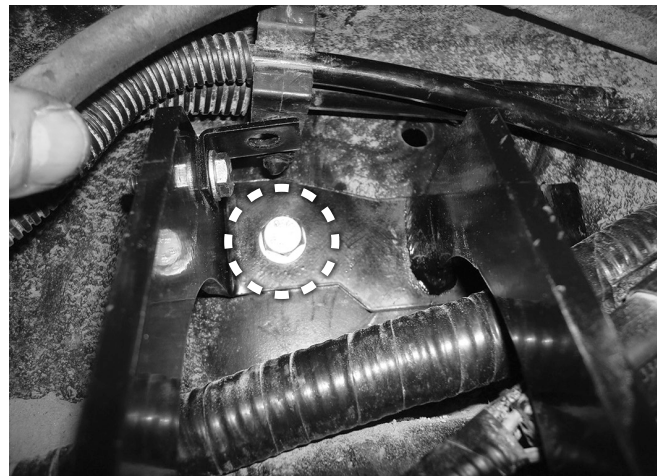


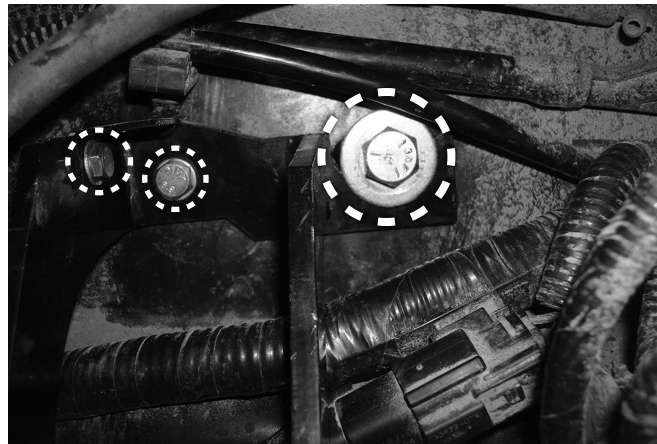
Fig. 11



Attach the bracket to the frame using the 8mm hardware noted.

Fig. 12

2. If the truck has no fifth-wheel hitch or if it has the standard equipment Reese fifth-wheel hitch that was purchased on the truck from Ford, in the frame there is a slot that is forward of the 8mm bolt just installed, insert the 1/2"-13 x 1.25" hex-cap screw (Q) and 1/2" flat washer (W) through the brace and frame (from the inside out). Cap with a 1/2" flat washer (W) and a 1/2"-13 serrated flange lock nut (Z) (Figs. 11, 13 & 14). Do not tighten at this time.



Driver's (left) side brace shown with supplied hardware in place. Existing fifth-wheel hardware which may have been removed may look different.

Fig. 13

OR

If the truck has an aftermarket fifth-wheel hitch that has an outer bracket (plate) running along side of the frame and it used this slot to secure the bracket with existing hardware, install the original fifth-wheel hardware previously removed in the "Prepare the Vehicle" section from the fifth-wheel installation for securing the brace (Fig. 11). Do not tighten at this time.

OR

If the truck has an aftermarket fifth-wheel hitch that has an outer bracket (plate) running along side of the frame and it **does not have** any attaching hardware on the side where the slot in the frame is, it will be necessary to drill a 1/2" hole through the plate using the slot in the frame as a template. Drill the hole as far to the rear of the slot as possible.



CRITICAL RISK CLEAR ANY ELECTRICAL OR HARD LINES FROM THE AREA SO AS NOT TO DAMAGE THEM IN ANY WAY WHEN DRILLING THE HOLE.



REMEMBER... It may be necessary to mark and remove the outer bracket (plate) from the side of the frame in order to drill the hole correctly. Reattach once the hole is drilled.

3. Insert a 1/2"-13 x 3" hex-cap screw (CC) with a 1/2" flat washer (W) through the brace, frame and fifth-wheel plate previously drilled. Cap with a 1/2" flat washer (W) and a 1/2"-13 serrated flange lock nut (Z) (Fig. 14). Leave loose at this time.

Rear View of Driver's (Left) Side Shown

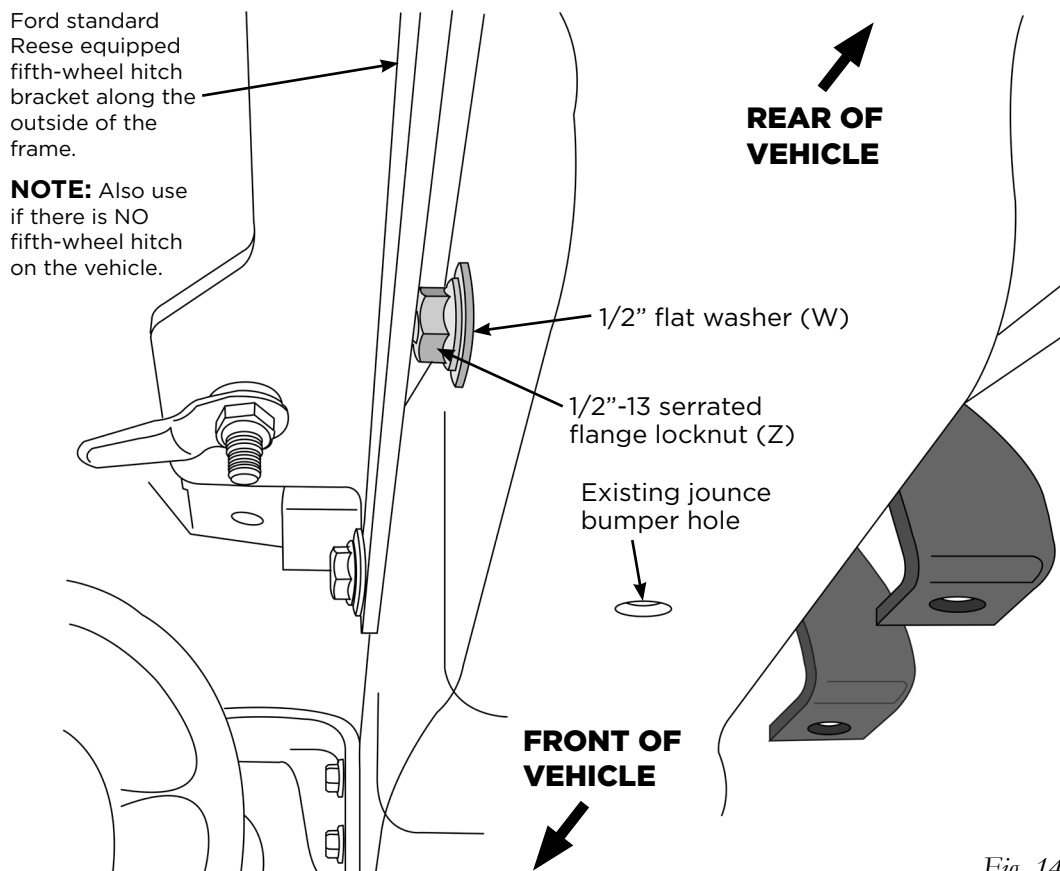
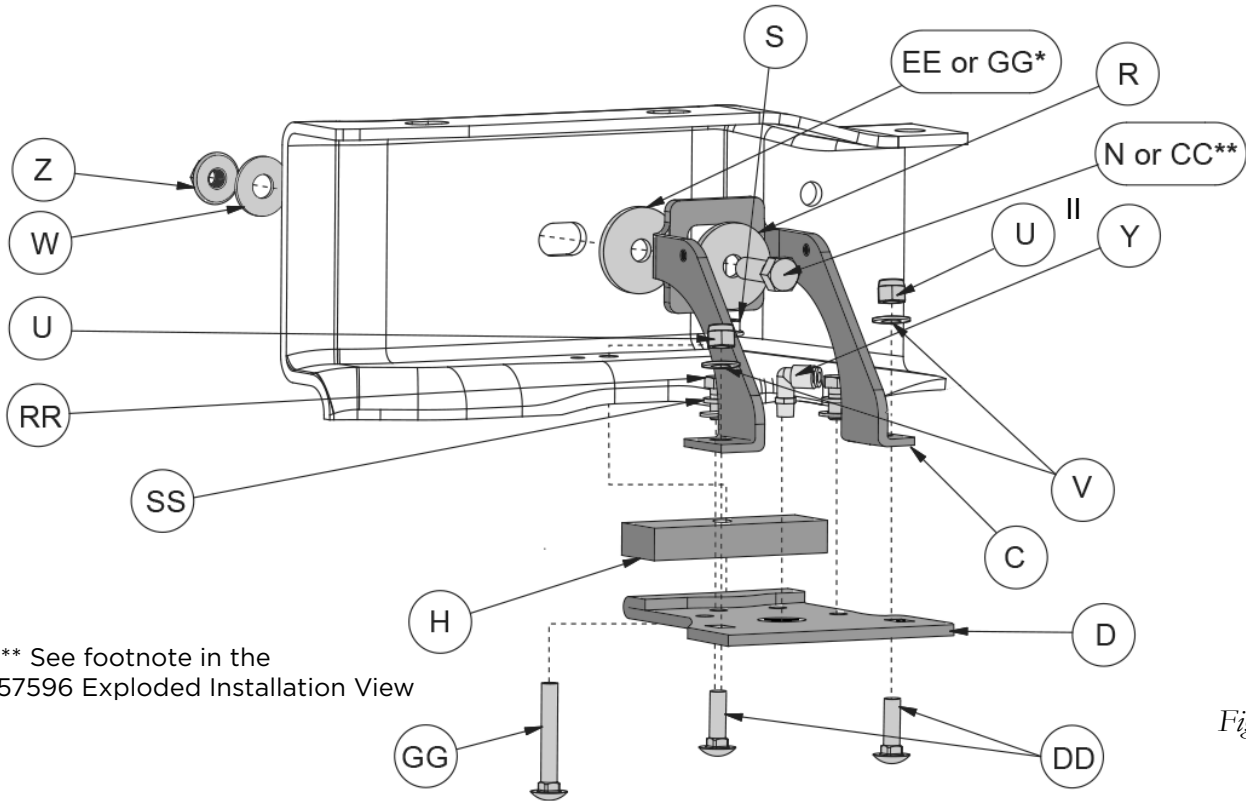


Fig. 14

Passenger's (Right) Side Brace Installation

1. Set the right upper brace (C) into the passenger's (right) side frame rail (Figs. 15, 16 & 17).

Inside View of Passenger's (Right) Side Frame Shown



* & ** See footnote in the AA57596 Exploded Installation View

Fig. 15

← FRONT OF VEHICLE

REAR OF VEHICLE →

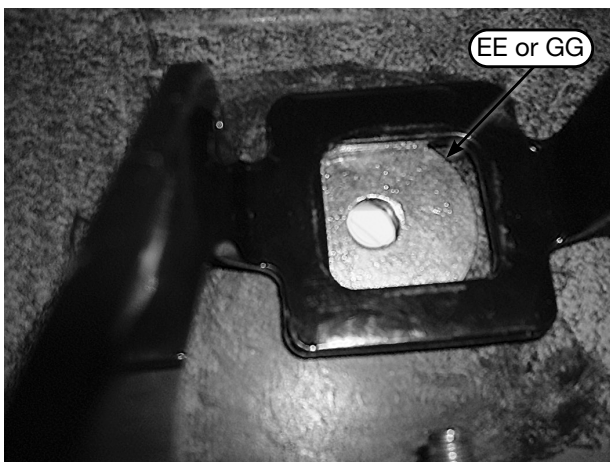


Fig. 16

For the passenger's (right) side, before inserting the upper brace hardware, make sure that the 1/2" thick flat washer (EE) or (GG) is installed in between the brace and frame (see Step 2). Note: The 1/2" thick flat washer (EE) is not a half inch thick. It has a 1/2" hole and is a thick washer.



Passenger's (right) side upper brace shown with hardware supplied in place.

Fig. 17

- For trucks with no fifth-wheel or the OEM purchased Reese fifth-wheel hitch, insert the 1/2"-13 x 1.5" hex-cap screw (N) and 1/2" thick flat washer (EE) through the brace, between the brace and the frame add the 1/2" thick flat washer (EE) then through the frame (from the inside out). **NOTE:** The 1/2" thick flat washer (EE) is not a half inch thick. It has a 1/2" hole and is a thick washer. Cap with a 1/2" flat washer (W) and a 1/2"-13 serrated flange lock nut (Z) (Figs. 14 & 15). Do not tighten at this time.

OR

If the truck has an aftermarket fifth-wheel hitch that has an outer bracket (plate) running along side of the frame and it used this slot to secure the bracket to the frame with existing hardware, re-install the original hardware previously removed in the "Prepare the Vehicle" section. However, add the 1/2" thick flat washer (EE) or 3/4" flat washer (GG) depending on whether the existing hardware is in between the brace and the frame (Fig. 15).



The 1/2" thick flat washer (EE) is not a half inch thick. It has a 1/2" hole and is a thick washer. Do not tighten at this time.

OR

If the truck has an aftermarket fifth-wheel hitch that has a bracket (plate) running along side of the frame and it **does not have** any attaching hardware on the side where the slot in the frame is, it will be necessary to drill a 1/2" hole through the plate using the slot in the frame as a template.



It may be necessary to mark and remove the bracket (plate) from the side of the frame in order to drill the hole correctly. Reattach once the hole is drilled.

Insert a 1/2"-13 x 3" hex-cap screw (CC) with a 1/2" thick flat washer (EE) through the brace, between the brace and the frame add the 1/2" thick flat washer (EE) then through the frame and fifth-wheel plate previously drilled. **NOTE:** The 1/2" thick flat washer (EE) is not a half inch thick. It has a 1/2" hole and is a thick washer. Cap with a 1/2" flat washer (W) and a 1/2"-13 serrated flange lock nut (Z) (Fig. 14). Leave loose at this time.

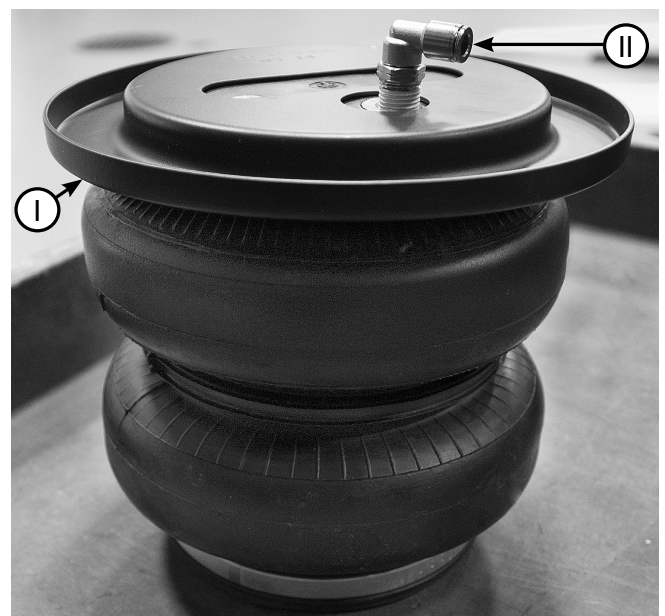
Air Spring and Bracket Assembly

- Set roll plates (I) over the top and bottom of the air springs (J) (see AA57596 Exploded Installation View & Fig. 18).



The radiused (rounded) edge of the roll plate (I) will be toward the air spring so that the air spring is seated inside both roll plates.

- Install the swivel elbow fitting (II) into the top of the air spring finger-tight. Tighten the swivel fitting one and a half turns.



Set roll plate (I) over the air spring and install the fitting (II) as stated. Repeat for both air spring.

Fig. 18

3. Insert a 5/16"-18 x 1" carriage bolt (BB) through the square hole in the lower bracket cup (B). Make sure to insert the carriage bolt on the flanged side of the bracket. Set the assembly onto the lower bracket main plate (A) making sure the lower bracket cup (B) is on the flanged side of the bracket (Fig. 19).

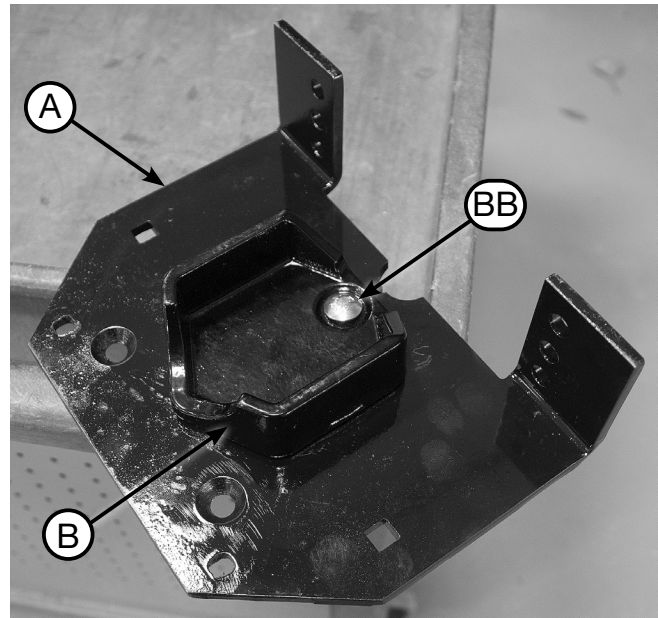
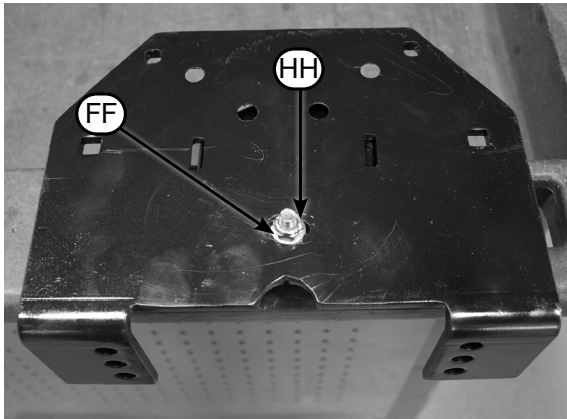


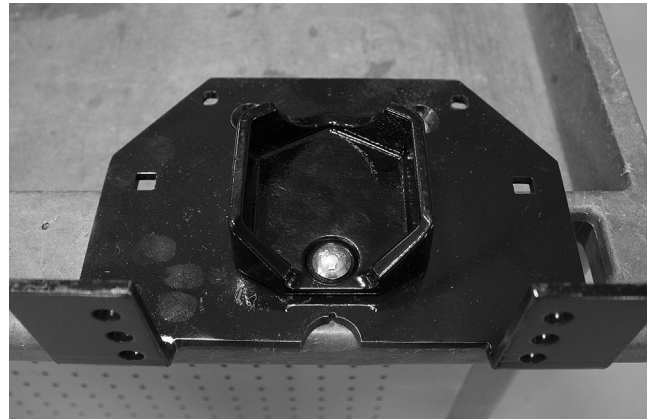
Fig. 19

4. Flip the assembly over and cap the 5/16"-18 x 1" carriage bolt with a 5/16" flat washer (FF) and 5/16" thin nylon lock nut (HH) (Fig. 20). Tighten the nut only tight enough so that the cup still swivels on the lower bracket main plate (Fig. 21).



Top of lower bracket

Fig. 20



Bottom of lower bracket

Fig. 21

5. Insert one of the 3/8"-16 x 10" carriage bolts (DD) into the lower bracket assembly previously assembled (Fig. 22). Determine which holes correspond with either side (Fig. 23).



The 3/8"-16 x 10" carriage bolts will be behind the axle once the assembly is installed on the axle.

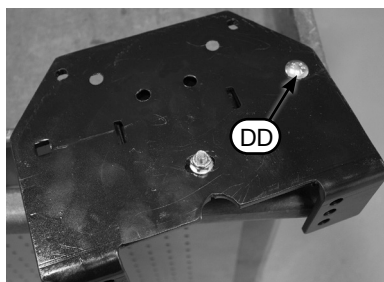


Fig. 22

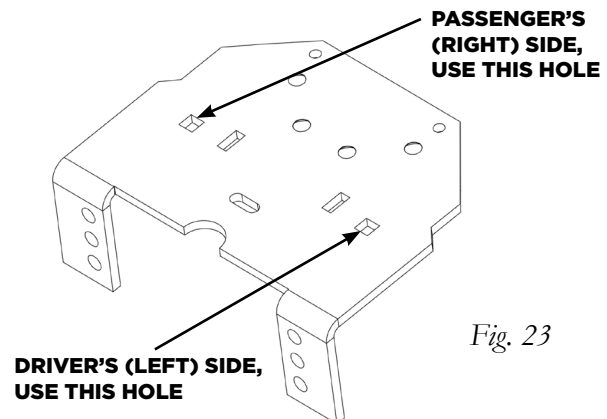
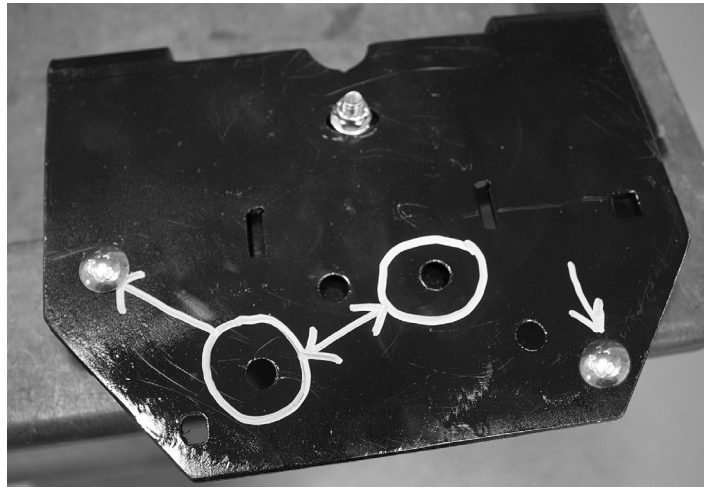


Fig. 23

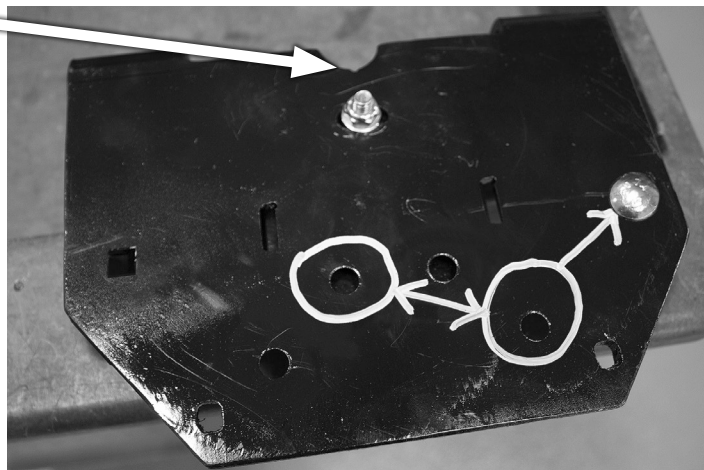
- The lower bracket assembly has two sets of air spring mounting holes, one for the driver's (left) side, the other for the passenger's (right) side. Insert one 5/16"-18 x 1" carriage bolt (BB) into the square hole as shown for the driver's (left) side assembly (Fig. 24). Using the corresponding holes in the lower bracket designated (Figs. 24 & 25), attach the air spring to the bracket using the 3/8"-24 x 3/4" flat-head screws (JJ) and torque to no more than 20 lb.-ft. (27Nm).



Driver's (left) side air spring mounting holes shown in relation to the 3/8"-16 x 10" carriage bolt previously installed. When installing on the air spring, make sure the bracket edge facing you is on the fitting side of the air spring.

Fig. 24

This slot should be on the opposite side of the air line fitting on the air spring once mounted.



Passenger's (right) side air spring mounting holes shown in relation to the 3/8"-16 x 10" carriage bolt previously installed. When installing on the air spring, make sure the bracket edge facing you is on the fitting side of the air spring.

Fig. 25

- Figures 26 & 27 shows the driver's (left) side and passenger's (right) side assemblies.

DRIVER'S (LEFT) SIDE



Fig. 26

PASSENGER'S (RIGHT) SIDE



The air fitting must be on this side of the assembly.

Fig. 27



Cut a small section of cardboard and fold it in half. When assembling the upper bracket to the air spring, set this cutout under the carriage bolt between the roll plate and upper bracket to hold the carriage bolt in place. This will make it easier to tighten the mounting hardware once in place on the frame (Fig. 28).



Fig. 28

- Set the lower bracket assembly aside. Pick up the driver's (left) side (F) and passenger's (right) side (D) upper brackets (Fig. 29). Insert two 3/8"-16 x 1.25" carriage bolts (O) up through the bottom of the driver's (left) side (F) and passenger's (right) side (D) upper brackets (Figs. 29 & 30), through the two square holes that are on the corresponding side. Also, insert one 3/8"-16 x 2" carriage bolt (M) through the remaining hole. The head of this carriage bolt will be hidden once the upper bracket is mounted to the air spring.

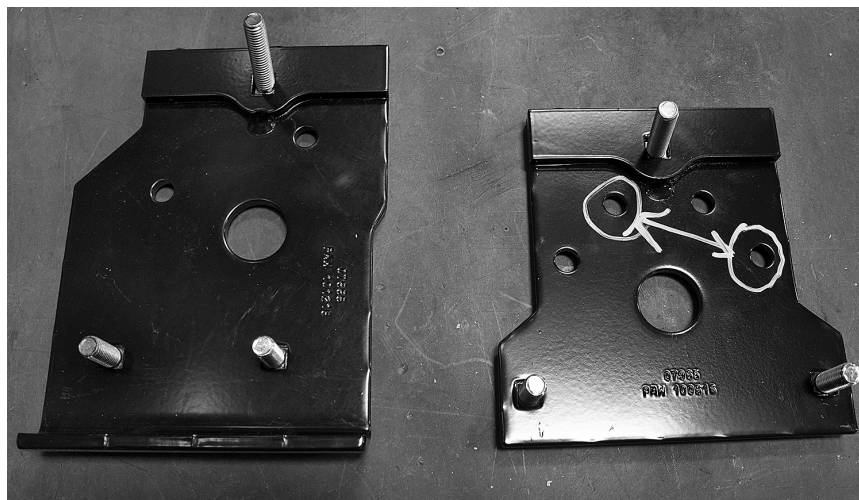
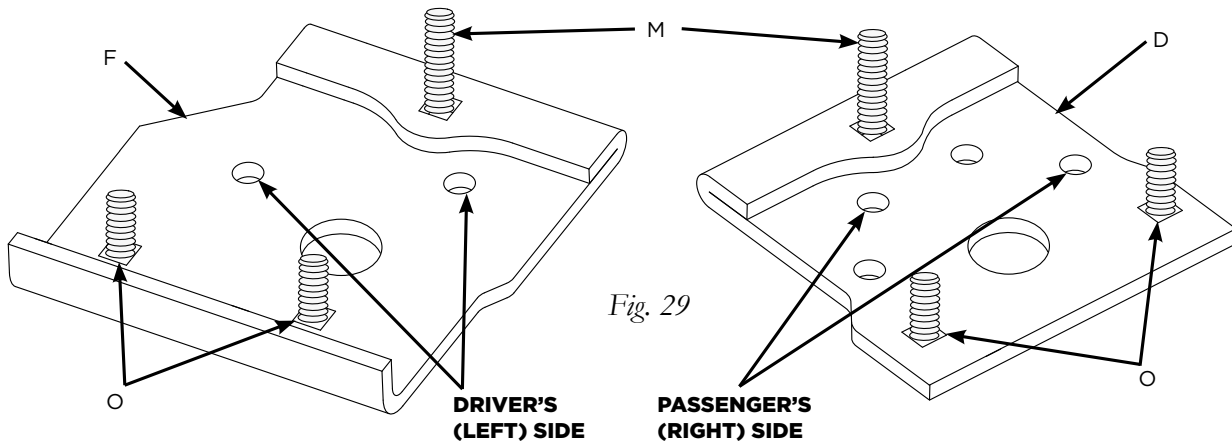
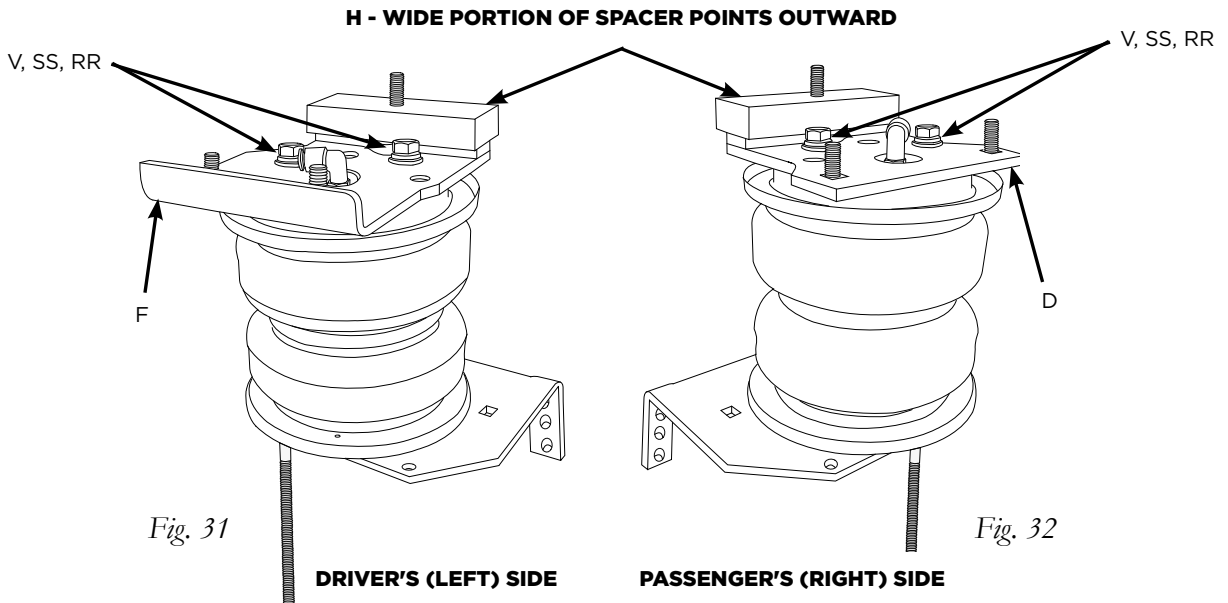


Fig. 30

DRIVER'S (LEFT) SIDE

PASSENGER'S (RIGHT) SIDE

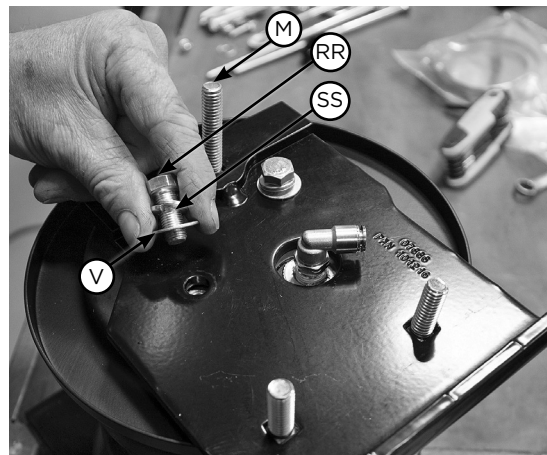
9. Set the driver's (left) side upper bracket onto the driver's (left) side air spring assembly previously assembled, using the holes in the upper bracket designated (Fig. 29), and attach to the air spring with two 3/8" flat washers (V), 3/8" lock washers (SS) and 3/8"-24 x 7/8" hex-cap screws (RR). Torque no more than 20 lb.-ft. (27Nm). (Figs. 31, 32 & 33).
10. Repeat the above process on the passenger's (right) side assembly (Fig. 32).



11. Set the spacers (H) over both 3/8"-16 x 2" carriage bolts (M) (Figs. 31, 32 & 34).



The hole in the flat spacer (H) is offset. Install the spacer so that the wide portion faces the outside of the vehicle (Figs. 31 & 34).



Attach the upper bracket to the air spring assembly with two 3/8" flat washers (V), 3/8" lock washers (SS), and 3/8"-24 x 7/8" hex head cap screws (RR).

Fig. 33



Spacer (H) set on bracket in position. The wide side of the spacer faces the outside of the vehicle.

Fig. 34

12. Figure 35 shows the assemblies complete and ready to install.

**DRIVER'S
(LEFT) SIDE
ASSEMBLY**



**PASSENGER'S
(RIGHT) SIDE
ASSEMBLY**

Fig. 35

Attach the Assemblies to the Frame

1. Drop the axle or raise the frame to make room to put the assemblies into position.
2. Set the driver's (left) side assembly onto the jounce bumper strike plate (Fig. 36). Make sure the 3/8"-16 x 10" carriage bolt (DD) on the bottom bracket goes outside the hard brake line on the back side of the axle. Raise the axle just enough to insert the 3/8"-16 x 2" carriage bolt (M) (that is installed in the upper bracket) through the existing jounce bumper hole in the bottom of the frame. At the same time, line up the upper brace into the remaining two carriage hole bolts in the assembly's upper bracket (Fig. 37). Do this just enough for the carriage bolts to hold the assembly into position in the frame, while resting on the jounce bumper strike plate (Fig. 36).

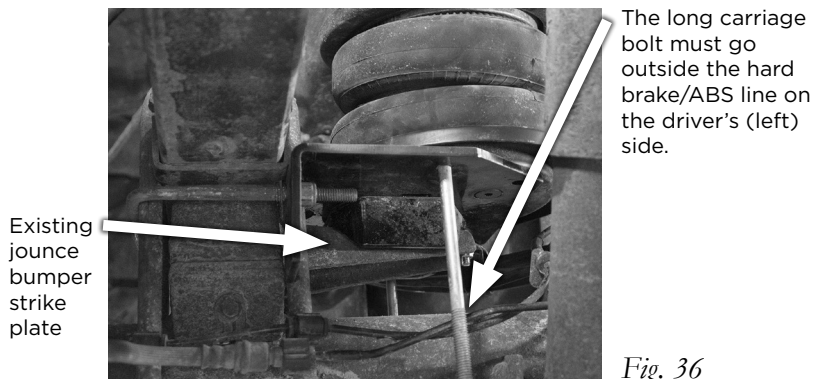


Fig. 36

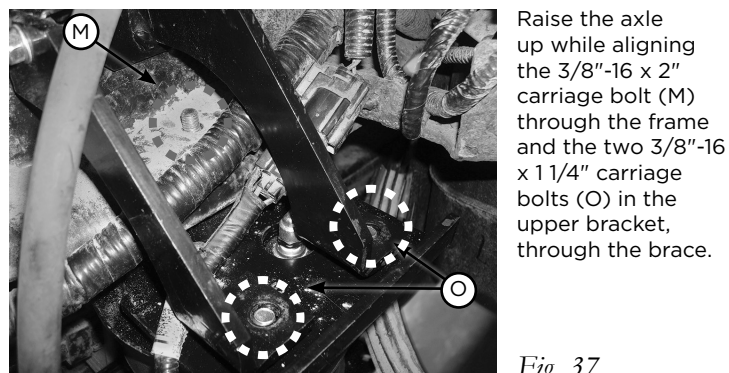
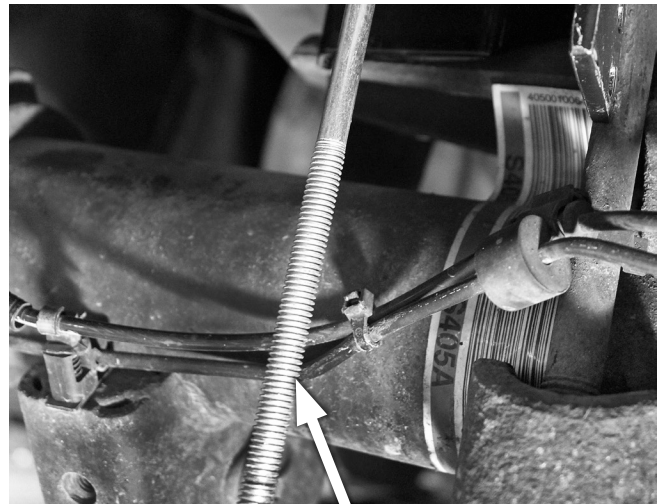


Fig. 37

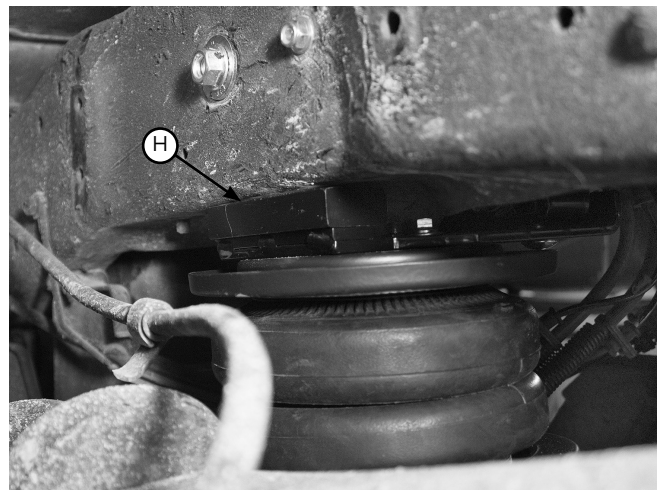
3. Set the passenger's (right) side assembly into position on the jounce bumper strike plate the same way the left side was positioned (Fig. 38). Note that the long carriage bolt goes outside of the hard brake line on the passenger's (right) side.



The long carriage bolt goes on the outside (backside) of the hard brake/ABS line on the passenger's (right) side.

Fig. 38

4. Make sure the thick spacer (H) is parallel to the frame and bracket (Fig. 39). Finish raising the axle or lowering the frame until the spacer contacts the frame on both sides.



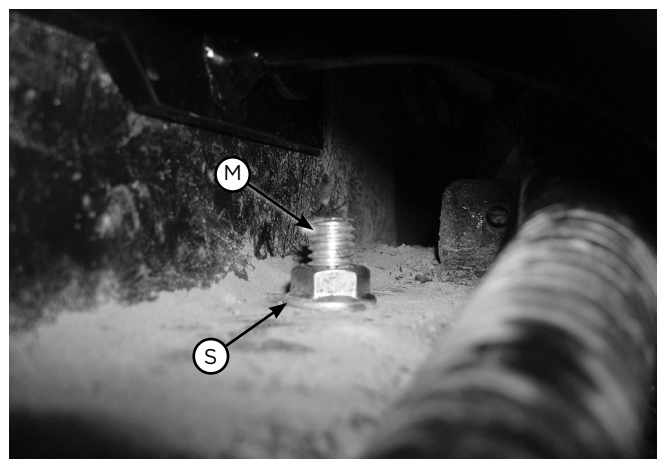
Make sure the spacer (H) is parallel to both the frame and upper bracket. Raise axle or lower frame until the spacer touches the frame on both sides.

Fig. 39

5. Install the 3/8"-16 serrated flange lock nut (S) on the 3/8"-16 X 2" carriage bolt (M) that went through the existing jounce bumper hole and tighten securely on both sides (Fig. 40).



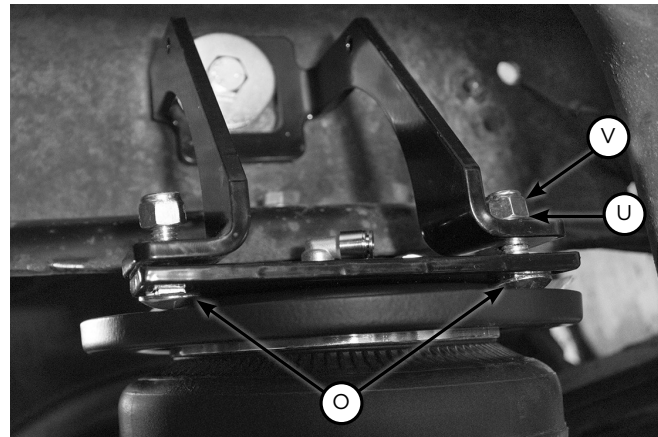
BE SURE NOT TO PINCH THE PREVIOUSLY MOVED WIRING OR LINES INSIDE THE LEFT FRAME RAIL.



Install the 3/8"-16 serrated flange lock nut (S) onto the 3/8"-16 x 2" carriage bolt (M) that goes through the flange on the frame and tighten.

Fig. 40

- Cap the 3/8"-16 x 1 1/4" carriage bolts (O) with 3/8" flat washers (V) and 3/8"-16 nylon lock nuts (U) on both sides and torque to 15 lb.-ft. (20Nm) (Fig. 41).



Cap the 3/8"-16 x 1 1/4" carriage bolts (O) with 3/8" flat washers (V) and 3/8"-16 nylon lock nuts (U), then torque to 15 lb.-ft. (20Nm). Repeat for both sides.

Fig. 41

- With the spacers (H) on the upper brackets tight to the bottom of the frame and the braces tight to the upper brackets, tighten the 8mm (driver's [left] side only) and 1/2" or 3/4" hardware previously installed, that hold the braces to the frame (Fig. 42). Tighten both sides.



IF POSSIBLE, USE A THIN SOCKET. IT HELPS TO PULL BACK THE DRIVER'S (LEFT) SIDE MOUNTING HARDWARE (Q OR CC) AS FAR BACK IN THE SLOT AS POSSIBLE WHILE TIGHTENING.



Tighten the M8 hardware and the 1/2" (or 3/4" if from the fifth-wheel hitch hardware) and tighten securely. Repeat for the hardware on the opposite side.

Fig. 42

- Once the driver's (left) side 1/2" or 3/4" hardware has been tightened, push the wiring harness connector - which was removed in the "Prepare the Vehicle" section - back into the gas/DEF tank mounting hole. If the connector broke during disassembly, zip tie it to the bracket (Figs. 4 & 5).
- If equipped with the emissions line previously loosened from the frame, insert the line holder post into the L-bracket (K) attached to the back leg of the upper left brace (E) (Fig. 43). It may be necessary to move the line holder post forward or back on the lines to line up correctly with the L-bracket hole. Reattach any line holders removed forward or behind the axle, if possible, that were removed to aid in positioning the upper bracket.

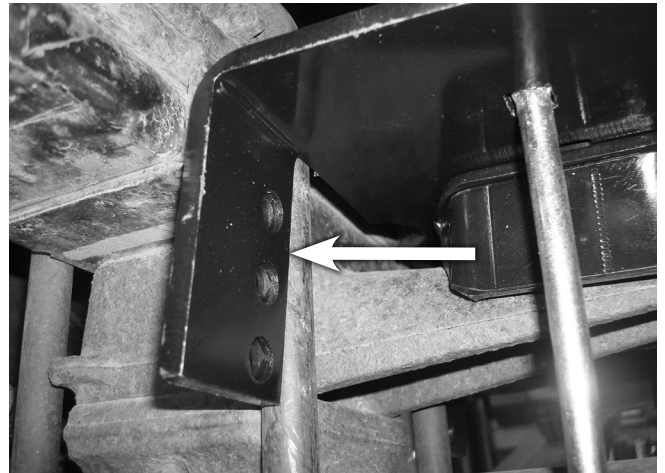
Insert the line holder previously removed into the L-bracket installed on the upper brace as shown.



Fig. 43

Attach the Lower Bracket to the Axle

1. Push the lower bracket up against the stock U-bolts so that the legs of the lower bracket are locked into position around the stock U-bolts (Fig. 44). It may be necessary to rotate the lower bracket on the jounce bumper strike plate in order to do this.



Rotate the lower bracket on the spring perch if necessary and push the bracket up against the U-bolts to put the lower bracket into position.

Fig. 44

2. Make sure the cup on the bottom of the lower bracket is nested onto the jounce bumper strike plate and the flanges of the cup are touching the strike plate on both the front and back side (Fig. 45). If it does not sit on the jounce bumper strike plate correctly, the cup swivels on the main plate. Rotate or move the cup to obtain this condition.



Make sure the cup is seated onto the jounce bumper strike plate forward and behind the axle.

Fig. 45

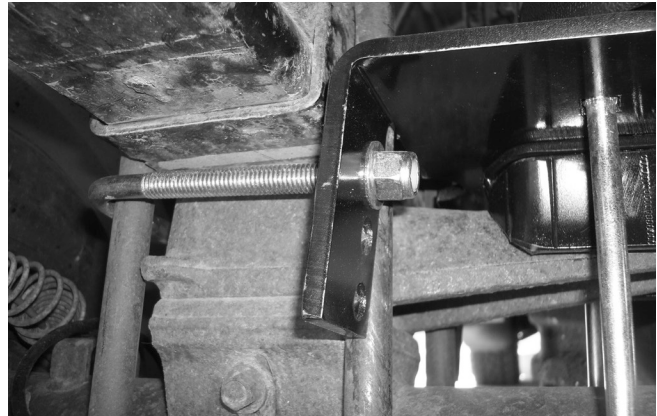
3. Position the U-bolt around the leaf spring assembly and insert in the hole closest to the leaf spring stack (Fig. 46). The lower bracket flanges must be locked on the front and rear of the stock U-bolts holding the leaf springs to the axle.



Use closest hole to the leaf spring.

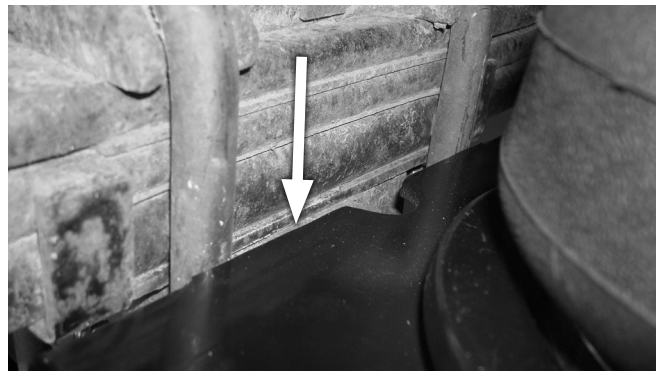
Fig. 46

4. Cap U-bolts with two 3/8" flat washers (V), and two 3/8"-16 nylon lock nuts (U) and evenly tighten only enough to draw the bracket up against the stock U-bolt at this time (Fig. 47). Repeat for the other side. Make sure the bracket rests against the stock U-bolts (Fig. 48).



Evenly tighten only enough to draw the lower bracket to the Stock U-bolts at this time.

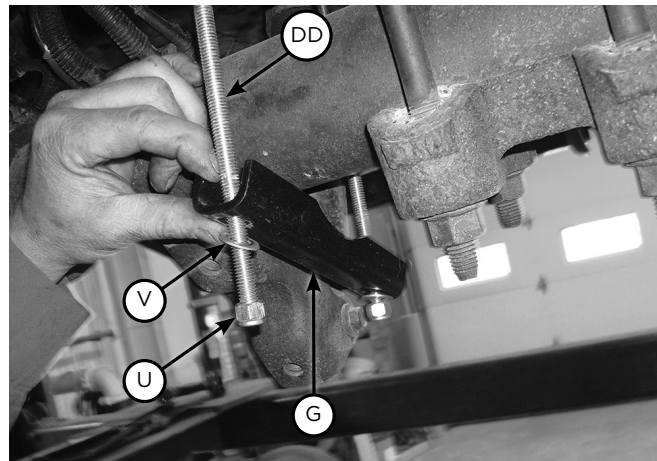
Fig. 47



Bracket must be up against the stock U-bolts and the flanges of the lower bracket must be locked forward and behind the stock U-bolts.

Fig. 48

5. Insert the remaining 3/8"-16 x 10" carriage bolts (DD) through the remaining square hole in the lower bracket (forward of the axle) opposite of the one previously installed during the air spring assembly. Set the clamp bar (G) over the carriage bolts (DD) and cap with two 3/8" flat washers (V) and 3/8"-16 nylon lock nuts (U) (Fig. 49). Repeat for the opposite side. Leave loose at this time.



Set the axle clamp bar over the 3/8"-16 x 10" carriage bolts (DD) and cap with 3/8" flat washers (V) and 3/8"-16 nylon lock nuts (U). Leave loose at this time.

Fig. 49

6. Tighten the axle clamp bar hardware evenly until it touches the axle (see note below). Torque the axle clamp bar bolts to 16 lb.-ft. (22Nm) (Fig. 50). Repeat for the opposite side. Trim the 3/8"-16 x 10" carriage bolts below the nylon lock nuts if necessary.

It may be necessary on some models to not tighten the axle clamp bar evenly on the passenger's (right) side so that the clamp bar will clear the hard brake line.



DO NOT PINCH THE HARD BRAKE LINE ON THE PASSENGER'S (RIGHT) SIDE WHILE TIGHTENING.

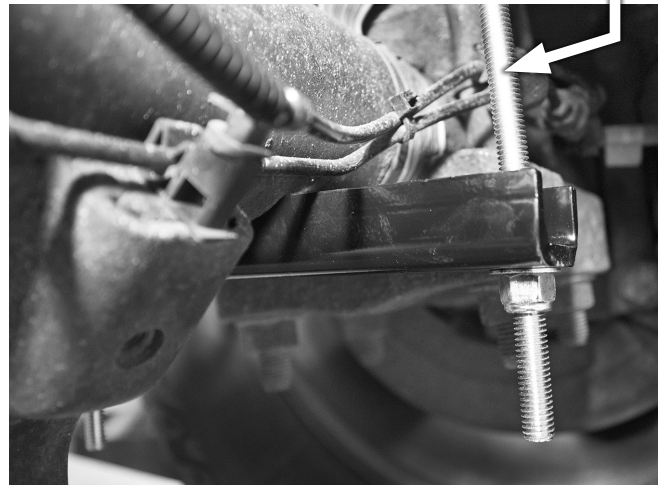


Fig. 50

7. Torque the leaf spring U-bolt hardware to 10 lb.-ft. (14Nm). Repeat for the opposite side. Once tight, the upper and lower brackets will not be parallel and may look like they are out of alignment. This condition will be OK because of the way the lower bracket and upper bracket mounts are designed. Some variance from one unit to another is considered normal.
8. Raise the axle up all the way (if not already done so) and remove the jack stands or equivalent used during the installation.
9. Tie together the soft and hard brake lines that are close to the lower air spring roll plate on the driver's (left) side with the large zip tie (VV) (Fig. 51).

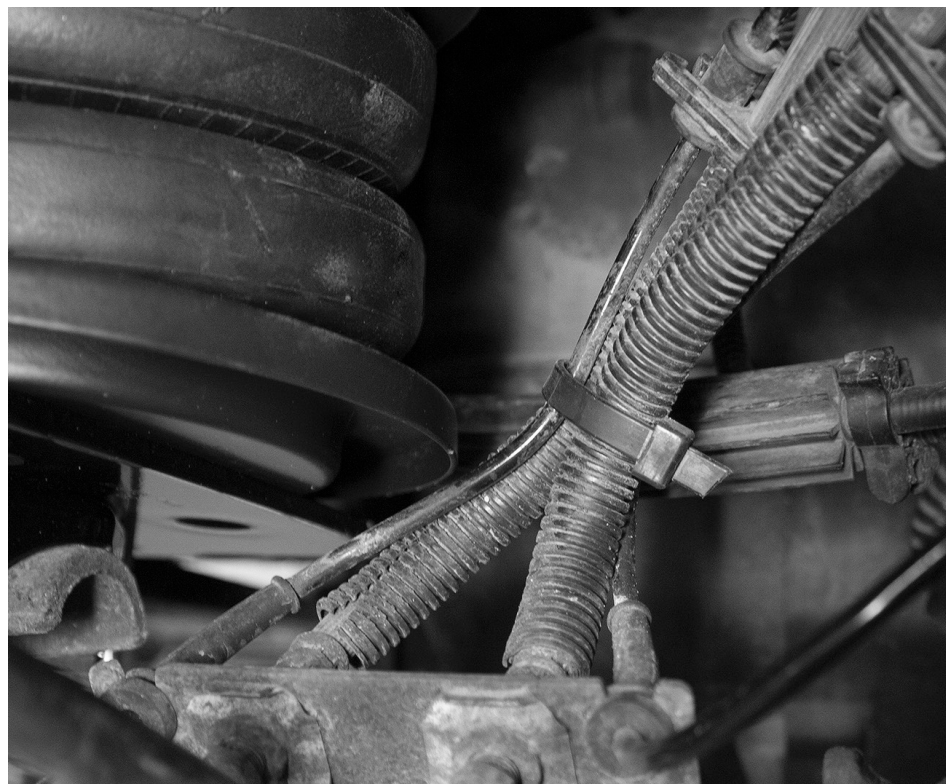
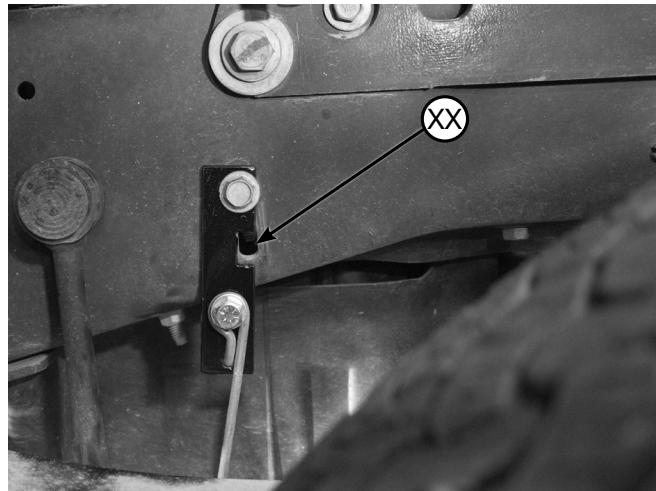


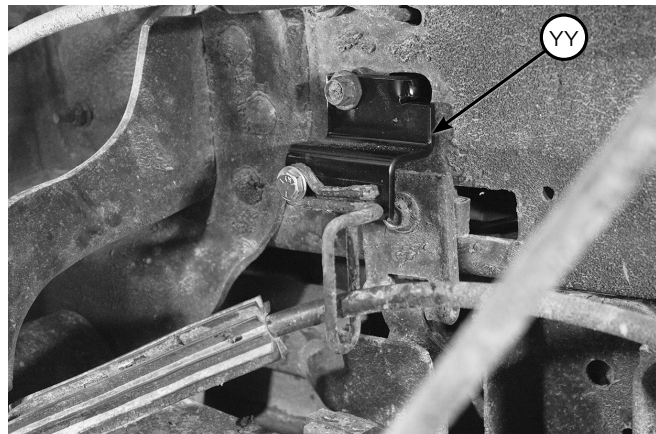
Fig. 51

10. Remove the two bolts that hold the emergency brake cable wire brackets to the frame on the driver's (left) side and install the two emergency brake cable spacer brackets to the frame using the existing hardware removed earlier. The emergency brake cable secondary bracket (XX) installs the farthest back on the driver's (left) side frame (Fig. 52). The emergency brake cable primary bracket (YY) installs in the forward location on the driver's (left) side frame rail (Fig. 53). Use two 5/16"-18 x 1" bolts (TT), four 5/16" flat washers (II) and two nylon lock nuts (UU) to attach the stock emergency brake wire brackets to both spacer brackets installed.



Install the smaller emergency brake secondary cable bracket the farthest back on the driver's (left) side frame.

Fig. 52



The larger emergency brake primary cable bracket installs in the forward position on the driver's (left) side frame.

Fig. 53

11. Install the P-clamp (WW) around the emergency brake cable (Fig. 54). Attach it to the lower bracket with the 5/16"-18 x 1" carriage bolt previously installed on the driver's side lower bracket with one 5/16" flat washer (FF) and a 5/16"-18 nylon lock nut (UU). Tighten securely.



The P-clamp must point down under the lower bracket.

Fig. 54

Air Lines Installation

1. Select Schrader Valve Locations

Choose suitable locations for the Schrader valves. If necessary, drill a 5/16" (8 mm) hole at each selected location. Common locations for mounting are inside fuel tank filler door, inside rear wheel wells, or by the license plate mount or rear bumper area.

2. Measure and Cut the Air Line

Measure the length of air line needed to reach your intended Schrader valve locations. Cut the air line (AA) using a sharp razor blade or hose cutter to make clean, square cuts. Do not use scissors or wire cutters, as these can deform the tubing and compromise the seal.

3. Route and Secure the Air Line

Route the air line (AA) from each air spring to the chosen Schrader valve locations. Plan the route to avoid sharp edges, moving parts, and heat sources. Once routed, use zip ties (BB) to secure the air line to stable points along the vehicle chassis. Do not pinch or kink the line. Leave at least 2" (51 mm) of slack to accommodate movement. The air line's minimum bend radius is 1" (25 mm).



Maintain a minimum of 5 1/2" (140 mm) clearance between all air lines and any part of the exhaust system. Avoid routing air lines over sharp edges or making tight bends.

4. Install Schrader Valves

Install the Schrader valves into the selected locations.

Heat Shield Installation (if provided in kit)

1. Position the Heat Shield

Place the heat shield over the exhaust pipe near the air spring. Maintain at least 1/2" (13 mm) of clearance between the shield and the exhaust surface. Depending on the design of the heat shield included in your kit, you may need to bend the tabs or the shield itself to achieve proper fitment and spacing.

2. Install the Air Line Thermal Sleeve (if included)

If your kit includes a thermal sleeve, slide it over the section of air line that runs closest to the exhaust. This sleeve helps protect the line from excessive heat exposure.

3. Secure Components with Hose Clamps

Use hose clamps to secure the heat shield and thermal sleeve (if used). Apply double clamps where needed for added security. Make final adjustments to ensure all components are properly spaced and firmly in place.

Checklist

Ensure the air suspension system is correctly installed and safe for operation by completing the following checks:

1. Clearance Verification

Inflate the air springs to 50 PSI (3.45 BAR). Confirm a minimum clearance of 1/2" (13 mm) between the air springs and any adjacent components, including tires, brake assemblies, the vehicle frame, shock absorbers, and brake lines. Adjust as needed to prevent contact during operation.

2. Heat Clearance Check

Verify that all air springs and air lines are positioned at least 5 1/2" (140 mm) away from any heat sources.

3. Leak Inspection

With the system pressurized to 50 PSI (3.45 BAR) inspect all fittings, air lines, and connections for leaks. All leaks must be fully resolved prior to road testing.

4. Road Test Procedure

Inflate the air springs to the recommended operating pressure and conduct a 10-mile (16 km) road test. Upon completion, re-inspect for adequate clearance, air leaks, and secure fasteners.

5. Torque Confirmation

After 500 miles (800 km) of driving, recheck and torque all hardware to the specified values to ensure long-term stability and safety.

Adjusting Air Pressure

Stability

Properly adjusting air pressure is key to achieving both vehicle stability and correct ride height. Begin by increasing pressure until the suspension feels firm and controlled—without exceeding the maximum of 100 PSI (7 BAR). Ensure the vehicle sits level across all four corners. Uneven loads may require redistributing cargo or adjusting air pressure side to side.

Comfort

Ride quality is also influenced by air pressure. Too much or too little can cause harshness or instability. As a general rule:

- If the vehicle frequently bottoms out on the frame, increase air pressure.
- If the ride feels overly stiff or harsh, reduce air pressure slightly.

Adjust gradually to find the best balance between comfort and control.

Guidelines

1. Check System Pressure Weekly

Inspect the air pressure in the system at least once a week to ensure consistent performance and ride quality.

2. Maintain Proper Ride Height

Always operate the vehicle at the recommended ride height. Do not exceed 100 PSI (7.0 BAR) under any circumstances.

3. Inspect for Air Leaks as Needed

If you suspect a leak, follow these steps to identify and address the issue:

- Inflate the air springs to 50 PSI (3.45 BAR).
- Spray all air line connections and the inflation valve with a mild solution of liquid dish soap and water.
- Wait 30 seconds and observe for any bubbles, which indicate a leak.
- Recheck the system pressure after 24 hours. A pressure loss of 2–4 PSI (0.14–0.28 BAR) is normal after initial installation. If the pressure drops by more than 5 PSI (0.34 BAR), recheck for leaks.
- Once testing is complete, adjust the air spring to the minimum pressure required for proper ride height.

4. Inspect Hardware and Component Alignment

Periodically check that all fasteners are properly torqued. Also, check for signs of rubbing or misalignment, and realign components as needed.

5. Clean the Air Springs

Occasionally, spray the air springs with clean water to remove mud, dirt, or debris that may collect during use.

6. Lift the Vehicle with Care

If lifting the vehicle by the frame, reduce system pressure to 5 PSI (0.34 BAR) to relieve tension on the air springs and mounting hardware.

Repair Guide

Fixing Leaks on Barbed Fittings

1. Cut the air line 1 1/2" (38 mm) behind the existing fitting.
2. Use pliers or locking pliers to twist and pull the air line off the fitting.



Do not cut lengthwise, as this may damage the barbs and lead to future leaks.

3. Reinstall the air line and clamp (if applicable), making sure the air line fully covers all barbs for a proper seal.

Fixing Leaks on Push-to-Connect (PTC) Fittings

To Disconnect:

1. Release all air pressure from the system.
2. Push the air line inward toward the fitting.
3. While holding the air line in, press the collar inward toward the fitting.
4. With the collar depressed, pull the air line out.

Before Reconnecting:

5. Cut off the end of the air line just beyond the witness mark to ensure a clean, undamaged sealing surface.
6. If the fitting leaks at the threads, remove it, apply fresh thread sealant, and reinstall it 1 1/2 turns beyond finger-tight.

To Reconnect:

7. Push the air line into the fitting until fully seated.
8. Gently pull back on the air line to verify a secure connection.

Warranty

What this warranty covers

Atlas Products Company provides a warranty to the original purchaser of its Load Support Products, for the periods of time listed at AtlasProducts.com, by product line, from the date of original purchase, that the products will be free from defects in workmanship and materials when used on cars and trucks as specified by Atlas Products Company and under normal operating conditions, subject to the requirements and exclusions set forth below.

What this warranty does not cover

The warranty does not apply to products that have been improperly applied, improperly installed, or that have not been maintained in accordance with the installation instructions furnished with all products. This warranty does not apply and is void if damage or failure is caused by: accident, abuse, misuse (including but not limited to racing or off-road activities or commercial use), abnormal use, faulty installation, liquid contact, fire, earthquake or other external cause; operating the product outside Atlas Products Company's instructions, specifications or guidelines; or service, alteration, maintenance or repairs performed by anyone other than Atlas Products Company to the product from its purchased condition. This warranty also does not apply to: consumable parts, such as batteries, cosmetic damage, including but not limited to scratches or dents; defects caused by normal wear and tear or otherwise due to the normal aging of the product, or if any serial or identification number has been removed or defaced from the product. Atlas Products Company reserves the right to change the design of any product without assuming any obligation to modify any product previously manufactured.

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How to get service

If a defect in workmanship or materials causes your Atlas product to become inoperable within the warranty period, before returning any defective product, email Atlas Products Company at support@atlusproducts.com. The consumer shall be responsible for removing the defective product from the vehicle (including any labor charges) and returning it, shipping costs prepaid, to Atlas Products Company for verification. You must prove to the satisfaction of Atlas Products Company the date of original purchase of your Atlas product. A minimum \$10 shipping and handling charge (plus applicable sales tax) will apply to all warranty claims. You must also pack the product to minimize the risk of it being damaged in transit. If we receive a product in damaged condition as the result of shipping, we will notify you and you must seek a claim with the shipper.

What Atlas Products Company will do

If you submit a valid claim to Atlas Products Company during the warranty period, and Atlas determines that the product was defective, Atlas Products Company will, at its option, repair your Atlas product or furnish you with a new or rebuilt product. Atlas Products Company will not reimburse you for repairs or replacement parts provided by other parties. Your repaired or replacement Atlas product will be returned to you (subject to payment of the required warranty claim shipping and handling charge), and it will be covered under the warranty for the balance of the warranty period, if any. When a product or part is replaced, any replacement item becomes your property and the replaced item becomes the property of Atlas Products Company. You are responsible for the installation/reinstallation (including any labor charges) of the product.

How the law relates to this warranty

This warranty gives you specific legal rights and you may also have other rights which vary from state to state. By this warranty, Atlas Products Company does not limit or exclude your rights except as allowed by law. To fully understand your rights, you should consult the laws of your state.

Customer Support

For Customer Service support, please contact us at:
support@atlusproducts.com

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